

IN THE CLAIMS

1. (previously presented) A method for supplying a system for sound attenuation of noise relating to an exhaust system of exhaust gases from a high power combustion engine, the method comprising:

adding to a model of the exhaust system, by means of a computing device, a plurality of elements where each element comprises a first reactive part, a resistive part and a second reactive part;

inserting into the model, by means of the computing device, at least one single attenuating device;

calculating, by means of the computing device, an attenuating effect of the elements and an attenuating effect of the at least one single attenuating device relating to a sound pressure level of the high power combustion engine;

repeating the inserting and calculating step, until the sound pressure level of the high power combustion engine is attenuated below a predetermined level;

assembling, based on the adding, inserting, calculating, and repeating steps, the system for sound attenuation, where the system comprises a plurality of elements and at least one single attenuating device mounted as channel parts along the exhaust system, and wherein a measured noise level at the close vicinity of an outlet is below the predetermined noise level.

2. (previously presented) A method according to claim 1, wherein calculating the attenuation effect of the elements further comprises calculating an attenuation effect for a band of frequencies corresponding to intermediate frequencies for one or more of the elements.

3. (previously presented) A method according to claim 2, wherein calculating the attenuation effect for the band of frequencies corresponding to the intermediate frequencies for one or more of the elements further comprises calculating the attenuation effect for the band of frequencies using four-pole theory and power flow models.

4. (previously presented) A method according to claim 1 or 3 wherein the at least one single reactive attenuating device is positioned at an odd number of a quarter of a wavelength from a distinct impedance, , and wherein the wavelength is the single attenuating device's tuned frequency.

5. (previously presented) A method according to claim 4, further comprising calculating a pressure drop along the exhaust system.

6. (currently amended) A method according to claim 1, wherein the minimum length of the exhaust system is 8 meters, and wherein the effect of the combustion engine is greater than 500 kW.

7. (previously presented) A method according to claim 6 where the exhaust system comprises a heat exchanger or boiler , which reduces the temperature of the exhaust gas in the exhaust system and therefore the wavelength of the sound decreases after the heat exchanger or boiler , and the at least one single attenuating device is positioned in an odd number of a quarter of the wavelength from the outlet of the heat exchanger or boiler , and where the wavelength is the single attenuating device's tuned frequency.

8.-10. (cancelled)

11. (currently amended) A system for attenuating noise in an exhaust system of a high power combustion engine, the system comprising:

a first number of single attenuating devices and a second number of attenuating elements, where each attenuating element further comprises a first reactive part, a resistive part and a second reactive part, and

the first number of attenuating devices and the second number of attenuating elements are arranged in a channel of the exhaust system such that a measured noise level at an outlet of the channel is attenuated below a predetermined noise level; and,

wherein the first number of attenuating devices and the second number of attenuating elements are determined and arranged in the exhaust system based upon:

adding, in a computerized model of the exhaust system by means of a program executed by a processor, a plurality of computer-modeled model attenuating elements representing the second number of attenuating elements, where each computer-modeled model attenuating element further comprises a computer-modeled model first reactive part representing the first reactive part, a computer-modeled model resistive part representing the resistive part, and a computer-modeled model second reactive part representing the second reactive part;

inserting, into the computerized model of the exhaust system by means of the program, a computer-modeled model single attenuating device representing one of the first number of single attenuating devices;

calculating, with the processor, an estimated sound pressure level at a first location in the computer-modeled-model exhaust system based upon an attenuation effect due to the addition of the plurality of computer-modeledmodel attenuating elements and the insertion of the computer-modeledmodel single attenuating device into the computer-modeledmodel exhaust system; and,

repeating the inserting and calculating step until the estimated sound pressure level at the first location of the computer-modeledmodel exhaust system is attenuated below the predetermined attenuation level.